

1 **Abstract:**

2 The present invention, discloses a novel monolithic
3 construction food container , which can be heated in a
4 microwave oven without distortion of its shape, without
5 interfering with or overloading the microwave energy beam
6 or the microwave radiant energy generation unit and without
7 leakage even when the contained food reaches a boiling
8 point, i.e., a temperature near 100 degrees Celsius. The
9 food container comprises an impermeable cavity defined by a
10 continuous seamless wall with a periphery, said periphery
11 having no folded gussets and is preferably polygonal in
12 shape, for example rectangular, pentagonal, hexagonal or
13 octagonal, said periphery also having a top peripheral
14 portion and a bottom peripheral portion, and ii) a bottom
15 surface, said bottom surface being hermetically, and
16 preferably seamlessly or integrally, joined to said bottom
17 peripheral portion thereby forming the impermeable cavity,
18 said wall and said bottom surface being made of a
19 thermoplastic polymeric material, a set of at least two
20 flaps, said flaps being joined, and preferably integrally
21 and seamlessly, to said top peripheral portion at joining
22 lines located on said top peripheral portion, said flaps
23 being made of same said thermoplastic polymeric material,
24 said joining lines being adapted to form flexural, and

1 preferably living, hinges along substantially straight
2 lines, said thermoplastic polymeric material having a glass
3 transition temperature of at least -(negative) 20 degrees
4 Celsius and/or a Heat Distortion Temperature , measured
5 under a stress of 264 psi, in accordance with ASTM Standard
6 Method No. D648, of at least 48 degrees Celsius, thereby
7 enabling said container to contain food and sustain heating
8 in a microwave oven without distortion of its shape,
9 without interfering with or overloading the radiant energy
10 generation unit and without leakage. Preferred examples of
11 such thermoplastic polymeric materials are polypropylene
12 and polystyrene.

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15 Doc.ID. Food Container Utility.Pat.Appln.11-20-03-Abstract
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